AI meets Visual CPQ, or Smart Creation of Smart 3D Models

Intelligentgraphics, a leading provider of high-quality 3D master data, announces the use of AI technology for the creation of smart 3D models.

ILMENAU, GERMANY, May 8, 2023 /EINPresswire.com/ -- Today's products, especially in but not limited to interior business, have an amazing complexity and thus a number of properties are necessary to configure them. Consequently, they're typically based on non-trivial commercial data.

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Modeling Configurable Products in 3D is challenging, in both quantity and quality

Additionally, they must be visualized as parametric 3D models: in high quality, even with interactive behavior, maybe for different dynamic target formats. And it's not just about quality, it's also the quantity! For instance, a typical upholstery product line of a supplier has around 50 complex parts in the average, in the max. more than 250, each of them with the dynamic behavior as described before. And there are typically hundreds of product lines just at one bigger manufacturer. This makes 3D data creation an expensive task! On the other hand, high-quality 3D is now a must-have, and it's not just useful to address some sales emotions, provide some AR/XR/VR experience; it also helps to avoid configuration errors and presents functional behavior.

In the meantime, the scanning of real-world objects in order to get a 3D model, has developed drastically and can now be done even with a smart phone without any special hardware. However, creation of complex, configurable and interactive products---just by scanning them--- seems still far away. Not even the segmentation of multi-material objects (are there mono- material ones out there?) has been solved sufficiently, let alone the issue of creation of proper texture coordinates to assign various fabrics and leathers (maybe with different patch sizes) later on in the configurator. But for single parts, as an alternative to 3D modeling, it is already an option; the one way or the other.

Today, intelligentgraphics, a leading provider of high-quality configurable and interactive 3D master data, with numerous major customers, both on the industry and retail side, announces the use of AI technology for the creation of smart 3D models! Moreover, AI technology will be used for automated quality assurance and other support jobs, such as generation of product images.

In the last 10 years, intelligentgraphics developed a super-parametric, semantic technology based on smart domain-specific patterns (upholstery, beds, cabinets, office furniture, etc.), which creates run-time-parametric 3D models for various proprietary target formats. Not only that this cuts down the data-creation costs drastically, it furthermore is a robust database for the whole product lifecycle and reduces the maintenance costs even more! On the one hand, this technology is a stable and rock-solid foundation for any data creation done at intelligentgraphics or it's customers, on the other side, there are now endless real-world model data available to train a large language model accordingly!

So, obviously, intelligentgraphics has all the needed requirements to bring these two worlds, AI and Visual CPQ, together, in order to speed up time to market and cut costs at the same time, without any compromises on the quality side! While intelligentgraphics has pretty good knowledge in the product groups it is doing business with, there's of course the opportunity for partners from other areas or product groups to join this activity, e.g. to contribute new patterns or implement further target formats.

Bottom line, the use of AI to support smart 3D models is expected to reduce creation effort and time, increase the data quality and enable new application scenarios, e.g. for virtual mockups.

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